Interview Summary	Application No.	Applicant(s)	
	10/613,660	EXCOFFIER ET AL.	
	Examiner	Art Unit	
	Cheyne D. Ly	2168	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Cheyne D. Ly*.

(2) *Ellen Baker for Applicant*.

(3) *Rackham Hoke for Applicant*.

(4)_____.

Date of Interview: *14 September 2006*.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☐ No.
If Yes, brief description: _____.

Claim(s) discussed: _____.

Identification of prior art discussed: _____.

Agreement with respect to the claims f)☐ was reached. g)☒ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *See Continuation Sheet*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)
In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: On September 13 and 14, 2006, Examiner telephoned applicant to suggest an Examiner's amendment to allow the instant Application. Examiner and Applicant have gone through four iterations of proposed amendments. However, no agreement has been reached; therefore, the proposed amendment presented to Examiner by email as authorized by Applicant will not be entered. Further, at the conclusion to the interview, Applicant has requested for the presence SPE. Examiner informed Applicant that the presence of a SPE at such interview is possible only with advance notice.. Examiner and Applicant has not agreed on a future date for an interview with a SPE present .

Ly, Cheyne

From: Ly, Cheyne
Sent: Thursday, September 14, 2006 12:11 PM
To: 'Ellen Baker'
Subject: RE: 10/613660 Proposed claim amendments v3 (Our File: 03226/500001)

Ellen and Rackham:

Here is my suggestion. It is very consistent with your recent proposal. My concern with your proposal of having the obtaining step before steps a), b), and c), is that the language in said steps would need to be amended to reflect the new step of "obtaining..."

Dune

-----Original Message-----
From: Ellen Baker [mailto:Baker@oshaliang.com]
Sent: Thursday, September 14, 2006 11:59 AM
To: Ly, Cheyne
Cc: Rackham K. Hoke; Ramona F. Hernandez
Subject: 10/613660 Proposed claim amendments v3 (Our File: 03226/500001)

Dune,

Thank you again for taking the time to discuss this application with us. By way of this email, we are authorizing you, and any other entities at the USPTO, to communicate with us via email concerning this application.

Attached is our proposed amendment to claim 1 (as well as the other claim amendments). As you will see, claim 1 now contains an "obtaining an updated tree structure" step similar to the one you agreed yesterday would be acceptable. The only difference is that the "obtaining" now encompasses former steps a, b, and c, rather than being limited to step c.

We look forward to your response.

Best regards,

Ellen and Rackham

Osha * Liang LLP
www.oshaliang.com

713-890-1794

PROPOSED CLAIM AMENDMENTS
DRAFT – CLIENT APPROVAL NEEDED

Version 3

Please amend the claims as follows.

1. (Currently Amended) A method of ~~operating~~ extending role scope in a directory server system comprising:

~~obtaining an updated tree structure comprising an extra scope by:~~

a) associating an existing role entry in a tree structure with a first user entry in the tree structure, wherein a directory server interacts with entries in the tree structure, and wherein the existing role entry defines a role and has an associated scope in the tree structure based on the existing role entry's location in the tree structure according to a first predefined rule, said associating comprising attaching the role to the first user entry subject to a first condition comprising a role membership condition and the first user entry belonging to the associated scope[[;]],

b) adding an attribute to the existing role entry having a special attribute name and being associated with an attribute value defining [[an]] the extra scope in the tree structure for the existing role entry, wherein the attribute value identifies a designated location in the tree structure outside the existing role entry's associated scope, and further wherein the extra scope is based on the designated location according to a second predefined rule[[;]], and

c) attaching the role of the existing role entry to a second user entry subject to a second condition comprising said role membership condition and the second user entry belonging to the extra scope; ~~and~~

~~responding to a request to perform a role operation associated with the updated tree structure, wherein the role operation identifies that the second user entry possesses the role~~.

d) obtaining the tree structure comprising the extra scope updated by steps a), b), and c);

e) performing a role operation associated with the updated tree structure, in response to a request, wherein the performed role operation identifies that the second user entry possesses the role.

2. (Previously Presented) The method of claim 1, wherein the existing role entry is a nested role entry defining at least one other role.

3. (Previously Presented) The method of claim 2, wherein the existing role entry has an attribute defining the at least one other role.

4. (Previously Presented) The method of claim 1, wherein the role membership condition comprises a candidate user entry having an attribute designating the role defined by the existing role entry.

5. (Previously Presented) The method of claim 1, wherein the existing role entry has a role filter condition, and the role membership condition comprises one or more attributes of a candidate user entry meeting the role filter condition.

6. (Original) The method of claim 5, wherein the existing role entry has an attribute designating the role filter condition.

7. (Cancelled)

8. (Cancelled)

9. (Previously Presented) The method of claim 1, wherein the extra scope is defined as a subtree of the designated location.

10. (Previously Presented) The method of claim 1, wherein the first predefined rule comprises defining the existing role entry's associated scope as a subtree of a parent of the existing role entry in the tree structure.

11. (Previously Presented) The method of claim 1, ~~further comprising:~~ wherein the request comprises

~~d) responding to~~ a request of whether a designated user entry has a given role [[by]], and wherein responding to the request comprises:

~~d1)~~ identifying a corresponding role entry corresponding to the given role;

~~d2)~~ determining whether the designated user entry meets the first condition in relation to the corresponding role entry;

~~d3)~~ if the designated user entry does not meet the first condition in relation to the corresponding role entry, determining whether the corresponding role entry has extra role data identifying [[an]] the extra scope; and

~~d4)~~ if the corresponding role entry has extra role data, determining whether the designated user entry meets the second condition in relation to the corresponding role entry.

12. (Previously Presented) The method of claim 1, ~~further comprising:~~ wherein the request comprises

~~d) responding to~~ a request for any user entries having a given role [[by]], and wherein responding to the request comprises:

~~d1)~~ identifying a corresponding role entry corresponding to the given role;

~~d2)~~ scanning the updated tree structure to identify any user entries meeting the first condition in relation to the corresponding role entry; and

~~d3)~~ if the corresponding role entry has extra role data identifying [[an]] the extra scope, scanning the updated tree structure to identify any user entries meeting the second condition in relation to the corresponding role entry.

13. (Previously Presented) The method of claim 1, ~~further comprising~~ wherein the request comprises:

~~d) responding to~~ a request for roles of a given user entry [[by]], and wherein responding to the request comprises:

~~d1)~~ identifying a candidate role entry;

~~d2)~~ determining whether the given user entry meets the first condition in relation to the candidate role entry;

~~d3)~~ if the given user entry does not meet the first condition in relation to the candidate role entry and the candidate role entry has extra role data

identifying [[an]] the extra scope, determining whether the given user entry meets the second condition in relation to the candidate role entry; and

~~d4)~~ repeating said d1) through said d3) with other candidate role entries until an end condition is met.

14. (Previously Presented) The method of claim 13, wherein the end condition comprises having performed said d1) through said d3) with substantially all the applicable candidate role entries.

15. (Currently Amended) The method of claim 13, wherein the given user entry belongs to a subtree of a top suffix of the updated tree structure, said d2) is performed for each role entry belonging to the subtree of said top suffix, and said d3) is performed for each role entry belonging to any subtree of any top suffix of the updated tree structure.

16. (Currently Amended) A directory server system comprising:

a directory server that interacts ~~interacting~~ with entries in a tree structure, said tree structure comprising an existing role entry and a first user entry, wherein the existing role entry defines a role and has an associated scope in the tree structure based on the existing role entry's location in the tree structure according to a first predefined rule;

a role mechanism that attaches ~~capable of attaching~~ the existing role entry's role to the first user entry subject to a first condition comprising a role membership condition and the first user entry belonging to the associated scope~~; and~~,

wherein said role mechanism further attaches ~~capable of attaching~~ the existing role entry's role to a second user entry subject to a second condition comprising said role membership condition and the second user entry belonging to an extra scope identified by extra role data of the existing role entry, wherein the extra role data comprise an added attribute having a special attribute name and being associated with an attribute value identifying a designated location in the tree structure outside of the existing role entry's associated scope, and the extra scope is based on the designated location according to a second predefined rule.

17. (Previously Presented) The directory server system of claim 16, wherein the existing role entry is a nested role entry defining at least one other role.

18. (Previously Presented) The directory server system of claim 17, wherein the existing role entry has an attribute defining the at least one other role.

19. (Previously Presented) The directory server system of claim 16, wherein the role membership condition comprises a candidate user entry having an attribute designating the role defined by the existing role entry.

20. (Previously Presented) The directory server system of claim 16, wherein the existing role entry has a role filter condition, and the role membership condition comprises one or more attributes of a candidate user entry meeting the role filter condition.

21. (Original) The directory server system of claim 20, wherein the existing role entry has an attribute designating the role filter condition.

22. (Cancelled)

23. (Cancelled)

24. (Previously Presented) The directory server system of claim 16, wherein the extra scope is defined as a subtree of the designated location.

25. (Previously Presented) The directory server system of claim 16, wherein the first predefined rule comprises defining the existing role entry's associated scope as a subtree of a parent of the existing role entry in the tree structure.

26. (Currently Amended) The directory server system of claim 16, wherein the role mechanism ~~is further capable of responding~~ responds to a request of whether a designated user entry has a given role by:

    i) identifying a corresponding role entry corresponding to the given role;

    ii) determining whether the designated user entry meets the first condition in relation to the corresponding role entry;

iii) if the designated user entry does not meet the first condition in relation to the corresponding role entry, determining whether the corresponding role entry has extra role data defining [[an]] the extra scope; and

iv) if the corresponding role entry has extra role data, determining whether the designated user entry meets the second condition in relation to the corresponding role entry.

27. (Currently Amended) The directory server system of claim 16, wherein the role mechanism ~~is further capable of responding~~ responds to a request for any user entries having a given role by:

i) identifying a corresponding role entry corresponding to the given role;

ii) scanning the tree to identify any user entries meeting the first condition in relation to the corresponding role entry; and

iii) if the corresponding role entry has extra data identifying [[an]] the extra scope, scanning the tree to identify any user entries meeting the second condition in relation to the corresponding role entry.

28. (Currently Amended) The directory server system of claim 16, wherein the role mechanism ~~is further capable of responding~~ responds to a request for roles of a given user entry by:

i) identifying a candidate role entry;

ii) determining whether the given user entry meets the first condition in relation to the candidate role entry;

iii) if the given user entry does not meet the first condition in relation to the candidate role entry and the determined role entry has extra data identifying [[an]] the extra scope, determining whether the given user entry meets the second condition in relation to the candidate role entry; and

iv) repeating said i) through said iii) with other candidate roles entries until an end condition is met.

29. (Previously Presented) The directory server system of claim 28, wherein the end condition comprises having performed said i) through said iii) with substantially all the applicable candidate role entries.

30. (Previously Presented) The directory server system of claim 28, wherein the given user entry belongs to a subtree of a top suffix of the tree structure, said ii) is performed for each role entry belonging to the subtree of said top suffix, and said iii) is performed for each role entry belonging to any subtree of any top suffix of the tree structure.

31. (Currently Amended) A computer readable storage medium ~~having stored thereon instructions~~ comprising software code stored thereon for:

a) associating an existing role entry in a tree structure with a first user entry in the tree structure, wherein a directory server interacts with entries in the tree structure, and wherein the existing role entry defines a role and has an associated scope in the tree structure based on the existing role entry's location in the tree structure according to a first predefined rule, said associating comprising attaching the role to the first user entry subject to a first condition comprising a role membership condition and the first user entry belonging to the associated scope;

b) adding an attribute to the existing role entry having a special attribute name and being associated with an attribute value defining an extra scope in the tree structure for the existing role entry, wherein the attribute value identifies a designated location in the tree structure outside the existing role entry's associated scope, and further wherein the extra scope is based on the designated location according to a second predefined rule; and

c) attaching the role of the existing role entry to a second user entry subject to a second condition comprising said role membership condition and the second user entry belonging to the extra scope.

32. (Currently Amended) The computer readable storage medium of claim 31, wherein the existing role entry is a nested role entry defining at least one other role.

33. (Currently Amended) The computer readable storage medium of claim 32, wherein the existing role entry has an attribute defining the at least one other role.

34. (Currently Amended) The computer readable storage medium of claim 31, wherein the role membership condition comprises a candidate user entry having an attribute designating the role defined by the existing role entry.

35. (Currently Amended) The computer readable storage medium of claim 31, wherein the existing role entry has a role filter condition, and the role membership condition comprises one or more attributes of a candidate user entry meeting the role filter condition.

36. (Currently Amended) The computer readable storage medium of claim 35, wherein the existing role entry has an attribute designating the role filter condition.

37. (Cancelled)

38. (Cancelled)

39. (Currently Amended) The computer readable storage medium of claim 31, wherein the extra scope is defined as a subtree of the designated location.

40. (Currently Amended) The computer readable storage medium of claim 31, wherein the first predefined rule comprises defining the existing role entry's associated scope as a subtree of a parent of the existing role entry in the tree structure.

41. (Currently Amended) The computer readable storage medium of claim 31, further comprising ~~instructions~~ software code stored thereon for:

~~d)~~ responding to a request of whether a designated user entry has a given role by:

~~d1)~~ identifying a corresponding role entry corresponding to the given role;

~~d2)~~ determining whether the designated user entry meets the first condition in relation to the corresponding role entry;

~~d3)~~ if the designated user entry does not meet the first condition in relation to the corresponding role entry, determining whether the corresponding role entry has extra role data identifying [[an]] the extra scope; and

~~d4)~~ if the corresponding role entry has extra role data, determining whether the designated user entry meets the second condition in relation to the corresponding role entry.

42. (Currently Amended) The computer readable storage medium of claim 31, further comprising ~~instructions~~ software code stored thereon for:

~~d)~~ responding to a request for any user entries having a given role by:

~~d1)~~ identifying a corresponding role entry corresponding to the given role;

~~d2)~~ scanning the tree to identify any user entries meeting the first condition in relation to the corresponding role entry; and

~~d3)~~ if the corresponding role entry has extra role data identifying [[an]] the extra scope, scanning the tree to identify any user entries meeting the second condition in relation to the corresponding role entry.

43. (Currently Amended) The computer readable storage medium of claim 31, further comprising ~~instructions~~ software code stored thereon for:

~~d)~~ responding to a request for roles of a given user entry by:

~~d1)~~ identifying a candidate role entry;

~~d2)~~ determining whether the given user entry meets the first condition in relation to the candidate role entry;

~~d3)~~ if the given user entry does not meet the first condition in relation to the candidate role entry and the candidate role entry has extra role data identifying [[an]] the extra scope, determining whether the given user entry meets the second condition in relation to the candidate role entry; and

~~d4)~~ repeating said d1) through said d3) with other candidate role entries until an end condition is met.

44. (Currently Amended) The computer readable storage medium of claim 43, wherein the end condition comprises having performed said d1) through said d3) with substantially all the applicable candidate role entries.

45. (Currently Amended) The computer readable storage medium of claim 43, wherein the given user entry belongs to a subtree of a top suffix of the tree structure, said d2) is performed for each role entry belonging to the subtree of said top suffix, and said d3) is performed for each role entry belonging to any subtree of any top suffix of the tree structure.

Ly, Cheyne

From: Ellen Baker [Baker@oshaliang.com]
Sent: Thursday, September 14, 2006 11:59 AM
To: Ly, Cheyne
Cc: Rackham K. Hoke; Ramona F. Hernandez
Subject: 10/613660 Proposed claim amendments v3 (Our File: 03226/500001)

Dune,

Thank you again for taking the time to discuss this application with us. By way of this email, we are authorizing you, and any other entities at the USPTO, to communicate with us via email concerning this application.

Attached is our proposed amendment to claim 1 (as well as the other claim amendments). As you will see, claim 1 now contains an "obtaining an updated tree structure" step similar to the one you agreed yesterday would be acceptable. The only difference is that the "obtaining" now encompasses former steps a, b, and c, rather than being limited to step c.

We look forward to your response.

Best regards,

Ellen and Rackham

Osha • Liang LLP
www.oshaliang.com

713-890-1794

PROPOSED CLAIM AMENDMENTS
DRAFT – CLIENT APPROVAL NEEDED

Version 3

Please amend the claims as follows.

1. (Currently Amended) A method of ~~operating~~ extending role scope in a directory server system comprising:

obtaining an updated tree structure comprising an extra scope by:

a) associating an existing role entry in a tree structure with a first user entry in the tree structure, wherein a directory server interacts with entries in the tree structure, and wherein the existing role entry defines a role and has an associated scope in the tree structure based on the existing role entry's location in the tree structure according to a first predefined rule, said associating comprising attaching the role to the first user entry subject to a first condition comprising a role membership condition and the first user entry belonging to the associated scope[[;]],

b) adding an attribute to the existing role entry having a special attribute name and being associated with an attribute value defining [[an]] the extra scope in the tree structure for the existing role entry, wherein the attribute value identifies a designated location in the tree structure outside the existing role entry's associated scope, and further wherein the extra scope is based on the designated location according to a second predefined rule[[;]], and

c) attaching the role of the existing role entry to a second user entry subject to a second condition comprising said role membership condition and the second user entry belonging to the extra scope; and

responding to a request to perform a role operation associated with the updated tree structure, wherein the role operation identifies that the second user entry possesses the role.

2. (Previously Presented) The method of claim 1, wherein the existing role entry is a nested role entry defining at least one other role.

3. (Previously Presented) The method of claim 2, wherein the existing role entry has an attribute defining the at least one other role.

4. (Previously Presented) The method of claim 1, wherein the role membership condition comprises a candidate user entry having an attribute designating the role defined by the existing role entry.

5. (Previously Presented) The method of claim 1, wherein the existing role entry has a role filter condition, and the role membership condition comprises one or more attributes of a candidate user entry meeting the role filter condition.

6. (Original) The method of claim 5, wherein the existing role entry has an attribute designating the role filter condition.

7. (Cancelled)

8. (Cancelled)

9. (Previously Presented) The method of claim 1, wherein the extra scope is defined as a subtree of the designated location.

10. (Previously Presented) The method of claim 1, wherein the first predefined rule comprises defining the existing role entry's associated scope as a subtree of a parent of the existing role entry in the tree structure.

11. (Previously Presented) The method of claim 1, ~~further comprising:~~ wherein the request comprises

~~d)~~ ~~responding to~~ a request of whether a designated user entry has a given role [[by]], and wherein responding to the request comprises:

~~d1)~~ identifying a corresponding role entry corresponding to the given role;

~~d2)~~ determining whether the designated user entry meets the first condition in relation to the corresponding role entry;

~~d3)~~ if the designated user entry does not meet the first condition in relation to the corresponding role entry, determining whether the corresponding role entry has extra role data identifying [[an]] the extra scope; and

~~d4)~~ if the corresponding role entry has extra role data, determining whether the designated user entry meets the second condition in relation to the corresponding role entry.

12. (Previously Presented) The method of claim 1, ~~further comprising:~~ wherein the request comprises

~~d) responding to~~ a request for any user entries having a given role [[by]], and wherein responding to the request comprises:

~~d1)~~ identifying a corresponding role entry corresponding to the given role;

~~d2)~~ scanning the updated tree structure to identify any user entries meeting the first condition in relation to the corresponding role entry; and

~~d3)~~ if the corresponding role entry has extra role data identifying [[an]] the extra scope, scanning the updated tree structure to identify any user entries meeting the second condition in relation to the corresponding role entry.

13. (Previously Presented) The method of claim 1, ~~further comprising~~ wherein the request comprises:

~~d) responding to~~ a request for roles of a given user entry [[by]], and wherein responding to the request comprises:

~~d1)~~ identifying a candidate role entry;

~~d2)~~ determining whether the given user entry meets the first condition in relation to the candidate role entry;

~~d3)~~ if the given user entry does not meet the first condition in relation to the candidate role entry and the candidate role entry has extra role data identifying [[an]] the extra scope, determining whether the given user entry meets the second condition in relation to the candidate role entry; and

~~d4)~~ repeating said d1) through said d3) with other candidate role entries until an end condition is met.

14. (Previously Presented) The method of claim 13, wherein the end condition comprises having performed said d1) through said d3) with substantially all the applicable candidate role entries.

15. (Currently Amended) The method of claim 13, wherein the given user entry belongs to a subtree of a top suffix of the updated tree structure, said d2) is performed for each role entry belonging to the subtree of said top suffix, and said d3) is performed for each role entry belonging to any subtree of any top suffix of the updated tree structure.

16. (Currently Amended) A directory server system comprising:

a directory server that interacts ~~interacting~~ with entries in a tree structure, said tree structure comprising an existing role entry and a first user entry, wherein the existing role entry defines a role and has an associated scope in the tree structure based on the existing role entry's location in the tree structure according to a first predefined rule;

a role mechanism that attaches ~~capable of attaching~~ the existing role entry's role to the first user entry subject to a first condition comprising a role membership condition and the first user entry belonging to the associated scope~~; and~~,

wherein said role mechanism further attaches ~~capable of attaching~~ the existing role entry's role to a second user entry subject to a second condition comprising said role membership condition and the second user entry belonging to an extra scope identified by extra role data of the existing role entry, wherein the extra role data comprise an added attribute having a special attribute name and being associated with an attribute value identifying a designated location in the tree structure outside of the existing role entry's associated scope, and the extra scope is based on the designated location according to a second predefined rule.

17. (Previously Presented) The directory server system of claim 16, wherein the existing role entry is a nested role entry defining at least one other role.

18. (Previously Presented) The directory server system of claim 17, wherein the existing role entry has an attribute defining the at least one other role.

19. (Previously Presented) The directory server system of claim 16, wherein the role membership condition comprises a candidate user entry having an attribute designating the role defined by the existing role entry.

20. (Previously Presented) The directory server system of claim 16, wherein the existing role entry has a role filter condition, and the role membership condition comprises one or more attributes of a candidate user entry meeting the role filter condition.

21. (Original) The directory server system of claim 20, wherein the existing role entry has an attribute designating the role filter condition.

22. (Cancelled)

23. (Cancelled)

24. (Previously Presented) The directory server system of claim 16, wherein the extra scope is defined as a subtree of the designated location.

25. (Previously Presented) The directory server system of claim 16, wherein the first predefined rule comprises defining the existing role entry's associated scope as a subtree of a parent of the existing role entry in the tree structure.

26. (Currently Amended) The directory server system of claim 16, wherein the role mechanism ~~is further capable of responding~~ responds to a request of whether a designated user entry has a given role by:

i) identifying a corresponding role entry corresponding to the given role;

ii) determining whether the designated user entry meets the first condition in relation to the corresponding role entry;

iii) if the designated user entry does not meet the first condition in relation to the corresponding role entry, determining whether the corresponding role entry has extra role data defining [[an]] the extra scope; and

iv) if the corresponding role entry has extra role data, determining whether the designated user entry meets the second condition in relation to the corresponding role entry.

27. (Currently Amended) The directory server system of claim 16, wherein the role mechanism ~~is further capable of responding~~ responds to a request for any user entries having a given role by:

i) identifying a corresponding role entry corresponding to the given role;

ii) scanning the tree to identify any user entries meeting the first condition in relation to the corresponding role entry; and

iii) if the corresponding role entry has extra data identifying [[an]] the extra scope, scanning the tree to identify any user entries meeting the second condition in relation to the corresponding role entry.

28. (Currently Amended) The directory server system of claim 16, wherein the role mechanism ~~is further capable of responding~~ responds to a request for roles of a given user entry by:

i) identifying a candidate role entry;

ii) determining whether the given user entry meets the first condition in relation to the candidate role entry;

iii) if the given user entry does not meet the first condition in relation to the candidate role entry and the determined role entry has extra data identifying [[an]] the extra scope, determining whether the given user entry meets the second condition in relation to the candidate role entry; and

iv) repeating said i) through said iii) with other candidate roles entries until an end condition is met.

29. (Previously Presented) The directory server system of claim 28, wherein the end condition comprises having performed said i) through said iii) with substantially all the applicable candidate role entries.

30. (Previously Presented) The directory server system of claim 28, wherein the given user entry belongs to a subtree of a top suffix of the tree structure, said ii) is performed for each role entry belonging to the subtree of said top suffix, and said iii) is performed for each role entry belonging to any subtree of any top suffix of the tree structure.

31. (Currently Amended) A computer readable storage medium ~~having stored thereon instructions~~ comprising software code stored thereon for:

a) associating an existing role entry in a tree structure with a first user entry in the tree structure, wherein a directory server interacts with entries in the tree structure, and wherein the existing role entry defines a role and has an associated scope in the tree structure based on the existing role entry's location in the tree

structure according to a first predefined rule, said associating comprising attaching the role to the first user entry subject to a first condition comprising a role membership condition and the first user entry belonging to the associated scope;

b) adding an attribute to the existing role entry having a special attribute name and being associated with an attribute value defining an extra scope in the tree structure for the existing role entry, wherein the attribute value identifies a designated location in the tree structure outside the existing role entry's associated scope, and further wherein the extra scope is based on the designated location according to a second predefined rule; and

c) attaching the role of the existing role entry to a second user entry subject to a second condition comprising said role membership condition and the second user entry belonging to the extra scope.

32. (Currently Amended) The computer readable storage medium of claim 31, wherein the existing role entry is a nested role entry defining at least one other role.

33. (Currently Amended) The computer readable storage medium of claim 32, wherein the existing role entry has an attribute defining the at least one other role.

34. (Currently Amended) The computer readable storage medium of claim 31, wherein the role membership condition comprises a candidate user entry having an attribute designating the role defined by the existing role entry.

35. (Currently Amended) The computer readable storage medium of claim 31, wherein the existing role entry has a role filter condition, and the role membership condition comprises one or more attributes of a candidate user entry meeting the role filter condition.

36. (Currently Amended) The computer readable storage medium of claim 35, wherein the existing role entry has an attribute designating the role filter condition.

37. (Cancelled)

38. (Cancelled)

39. (Currently Amended) The computer readable storage medium of claim 31, wherein the extra scope is defined as a subtree of the designated location.

40. (Currently Amended) The computer readable storage medium of claim 31, wherein the first predefined rule comprises defining the existing role entry's associated scope as a subtree of a parent of the existing role entry in the tree structure.

41. (Currently Amended) The computer readable storage medium of claim 31, further comprising ~~instructions~~ software code stored thereon for:

~~d)~~ responding to a request of whether a designated user entry has a given role by:

~~d1)~~ identifying a corresponding role entry corresponding to the given role;

~~d2)~~ determining whether the designated user entry meets the first condition in relation to the corresponding role entry;

~~d3)~~ if the designated user entry does not meet the first condition in relation to the corresponding role entry, determining whether the corresponding role entry has extra role data identifying [[an]] the extra scope; and

~~d4)~~ if the corresponding role entry has extra role data, determining whether the designated user entry meets the second condition in relation to the corresponding role entry.

42. (Currently Amended) The computer readable storage medium of claim 31, further comprising ~~instructions~~ software code stored thereon for:

~~d)~~ responding to a request for any user entries having a given role by:

~~d1)~~ identifying a corresponding role entry corresponding to the given role;

~~d2)~~ scanning the tree to identify any user entries meeting the first condition in relation to the corresponding role entry; and

~~d3)~~ if the corresponding role entry has extra role data identifying [[an]] the extra scope, scanning the tree to identify any user entries meeting the second condition in relation to the corresponding role entry.

43. (Currently Amended) The computer readable storage medium of claim 31, further comprising ~~instructions~~ software code stored thereon for:

~~d)~~ responding to a request for roles of a given user entry by:

~~d1)~~ identifying a candidate role entry;

~~d2)~~ determining whether the given user entry meets the first condition in relation to the candidate role entry;

~~d3)~~ if the given user entry does not meet the first condition in relation to the candidate role entry and the candidate role entry has extra role data identifying [[an]] the extra scope, determining whether the given user entry meets the second condition in relation to the candidate role entry; and

~~d4)~~ repeating said d1) through said d3) with other candidate role entries until an end condition is met.

44. (Currently Amended) The computer readable storage medium of claim 43, wherein the end condition comprises having performed said d1) through said d3) with substantially all the applicable candidate role entries.

45. (Currently Amended) The computer readable storage medium of claim 43, wherein the given user entry belongs to a subtree of a top suffix of the tree structure, said d2) is performed for each role entry belonging to the subtree of said top suffix, and said d3) is performed for each role entry belonging to any subtree of any top suffix of the tree structure.

REMARKS

Please reconsider this application in view of the above amendments and the following remarks. The Applicant thanks the Examiner for carefully considering this application and for indicating that the claims of record would be allowable if the rejections under 35 U.S.C. § 112 are overcome (*see* Office Action dated June 27, 2006, page 4).

Examiner Interview

The Applicant thanks the Examiner for the courtesies extended during the Examiner Interview conducted on August 14, 2006. The Applicant has reviewed the Examiner's interview summary and has no additional comments at this point in the prosecution.

Disposition of Claims

Claims 1-6, 9-21, 24-36, and 39-45 are pending in the application. Claims 1, 16, and 31 are independent. The remaining claims depend, directly or indirectly, from independent claims 1, 16, and 31.

Claim Amendments

By way of this reply, claims 1, 10, 16, 25, 31, and 40 have been amended to clarify antecedent basis issues. Specifically, the claims have been amended to clarify that the predefined rule referred to in claims 10, 25, and 40 corresponds to a *first* predefined rule. Further, by way of this reply, claim 16 has been amended to correct a typographical error.

Priority Document

The Applicant has recently discovered that a certified copy of the French priority document for this application has not been forwarded to date. This failure to submit the priority document was inadvertent and unintentional. A copy of the certified priority document is being filed contemporaneously with this response.

Rejections under 35 U.S.C. § 112 ¶ 2

Claims 10, 25, and 40 stand rejected under 35 U.S.C. § 112 ¶ 2 as being indefinite. Specifically, the Examiner has asserted that claims 10, 25, and 40 lack sufficient antecedent basis for "the predefined rule" recited in the claims (*see* Office Action dated June 27, 2006, page 2). By way of this reply, claims 1, 10, 16, 25, 31, and 40 have been amended to clarify that the predefined rule referred to in claims 10, 25, and 40 corresponds to a *first* predefined rule. In view of these amendments, the Applicant respectfully submits that amended claims 10, 25, and 40 are not indefinite. Accordingly, withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 112 ¶ 1

Claims 1-6, 9-21, 24-36, and 39-45 stand rejected under 35 U.S.C. § 112 ¶ 1 as failing to comply with the written description requirement. Specifically, the Examiner has asserted that the disclosure does not provide written basis for "a first user entry in the tree structure" and "a second user entry ... the second user entry belonging to the extra scope" as

recited in independent claims 1, 16, and 31 (*see* Office Action date June 27, 2006, pages 3-4). This rejection is respectfully traversed. Specifically, written basis for the limitations in question can be found in the Specification as published, as described below.

1. A first user entry in the tree structure

As described in the Specification, a role entry typically has an associated scope based on the role entry's location in the tree structure (*see, e.g.,* Figure 6, where the scope of a role entry is a subtree of the role entry's parent entry). Further, user entries belonging to the associated scope may be members of the role subject to a role membership condition. For example, members of a managed role must have an attribute designating the role defined in the role entry (*e.g.,* a distinguished name (DN) attribute corresponding to the DN of the role entry); members of a filtered role must match a filter specified in the role entry; and members of a nested role must meet the role condition(s) for at least one of the roles referenced by the role entry (*see, e.g.,* page 18, line 18 – page 21, line 10 of the Specification). Thus, the "first user entry" recited in the claims is a user entry that belongs to a role's scope and meets the appropriate role membership condition, as clearly supported by the Specification.

2. a second user entry... the second user entry belonging to the extra scope

As described in the Specification, an extra scope may be defined for a role entry by adding an attribute to the role entry that defines the extra scope (*see, e.g.,* page 23, lines 4-15 of the Specification). Figure 14 shows one example of an extended role, where an *nsRoleScopeDN* attribute is added to the *cn = everybody_cross2* role entry to extend the role's scope to include the subtree of *o = suffix2* (*see* also page 32, line 15 – page 34, line 7). Further, user entries belonging to the extra scope may be members of the extended role subject to a role

membership condition, as described above (*see also* page 25, lines 4-9 of the Specification). Thus, the "second user entry" recited in the claims is a user entry that belongs to the extra scope and meets the appropriate role membership condition, as clearly supported by the Specification.

In view of the above, the Specification clearly provides written basis for "a first user entry in the tree structure" and "a second user entry ... the second user entry belonging to the extra scope" as recited in independent claims 1, 16, and 31. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

The Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 03226/500001; P7528).

Dated: August 28, 2006

Respectfully submitted,

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Application No.: 10/613,660 Docket No.: 03226/500001; P7528

PROPOSED CLAIM AMENDMENTS
DRAFT – CLIENT APPROVAL NEEDED

9 pages

Please amend the claims as follows.

1. (Currently Amended) A method of ~~operating~~ extending role scope in a directory server system comprising:
    a) associating an existing role entry in a tree structure with a first user entry in the tree structure, wherein a directory server interacts with entries in the tree structure, and wherein the existing role entry defines a role and has an associated scope in the tree structure based on the existing role entry's location in the tree structure according to a first predefined rule, said associating comprising attaching the role to the first user entry subject to a first condition comprising a role membership condition and the first user entry belonging to the associated scope;
    b) adding an attribute to the existing role entry having a specia.. attribute name and being associated with an attribute value defining an extra scope in the tree structure for the existing role entry, wherein the attribute value identifies a designated location in the tree structure outside the existing role entry's associated scope, and further wherein the extra scope is based on the designated location according to a second predefined rule; and
    c) attaching the role of the existing role entry to a second user entry subject to a second condition comprising said role membership condition and the second user entry belonging to the extra scope, to obtain an updated tree structure comprising an extended role scope.

2. (Previously Presented) The method of claim 1, wherein the existing role entry is a nested role entry defining at least one other role.

3. (Previously Presented) The method of claim 2, wherein the existing role entry has an attribute defining the at least one other role.

4. (Previously Presented) The method of claim 1, wherein the role membership condition comprises a candidate user entry having an attribute designating the role defined by the existing role entry.

5. (Previously Presented) The method of claim 1, wherein the existing role entry has a role filter condition, and the role membership condition comprises one or more attributes of a candidate user entry meeting the role filter condition.

6. (Original) The method of claim 5, wherein the existing role entry has an attribute designating the role filter condition.

7. (Cancelled)

8. (Cancelled)

9. (Previously Presented) The method of claim 1, wherein the extra scope is defined as a subtree of the designated location.

10. (Previously Presented) The method of claim 1, wherein the first predefined rule comprises defining the existing role entry's associated scope as a subtree of a parent of the existing role entry in the tree structure.

11. (Previously Presented) The method of claim 1, further comprising:

    d) responding to a request of whether a designated user entry has a given role by:

        d1) identifying a corresponding role entry corresponding to the given role;

        d2) determining whether the designated user entry meets the first condition in relation to the corresponding role entry;

        d3) if the designated user entry does not meet the first condition in relation to the corresponding role entry, determining whether the corresponding role entry has extra role data identifying an extra scope; and

        d4) if the corresponding role entry has extra role data, determining whether the designated user entry meets the second condition in relation to the corresponding role entry.

12. (Previously Presented) The method of claim 1, further comprising:

d) responding to a request for any user entries having a given role by:

d1) identifying a corresponding role entry corresponding to the given role;

d2) scanning the tree to identify any user entries meeting the first condition in relation to the corresponding role entry; and

d3) if the corresponding role entry has extra role data identifying an extra scope, scanning the tree to identify any user entries meeting the second condition in relation to the corresponding role entry.

13. (Previously Presented) The method of claim 1, further comprising:

d) responding to a request for roles of a given user entry by:

d1) identifying a candidate role entry;

d2) determining whether the given user entry meets the first condition in relation to the candidate role entry;

d3) if the given user entry does not meet the first condition in relation to the candidate role entry and the candidate role entry has extra role data identifying an extra scope, determining whether the given user entry meets the second condition in relation to the candidate role entry; and

d4) repeating said d1) through said d3) with other candidate role entries until an end condition is met.

14. (Previously Presented) The method of claim 13, wherein the end condition comprises having performed said d1) through said d3) with substantially all the applicable candidate role entries.

15. (Previously Presented) The method of claim 13, wherein the given user entry belongs to a subtree of a top suffix of the tree structure, said d2) is performed for each role entry belonging to the subtree of said top suffix, and said d3) is performed for each role entry belonging to any subtree of any top suffix of the tree structure.

16. (Currently Amended) A directory server system comprising:

a directory server configured to interact[[ing]] with entries in a tree structure, said tree structure comprising an existing role entry and a first user entry, wherein the existing role entry defines a role and has an associated scope in the tree structure based on the existing role entry's location in the tree structure according to a first predefined rule;

a role mechanism ~~capable of~~ configured to attach[[ing]] the existing role entry's role to the first user entry subject to a first condition comprising a role membership condition and the first user entry belonging to the associated scope; and

said role mechanism further ~~capable of~~ configured to attach[[ing]] the existing role entry's role to a second user entry subject to a second condition comprising said role membership condition and the second user entry belonging to an extra scope identified by extra role data of the existing role entry, wherein the extra role data comprise an added attribute having a special attribute name and being associated with an attribute value identifying a designated location in the tree structure outside of the existing role entry's associated scope, and the extra scope is based on the designated location according to a second predefined rule.

17. (Previously Presented) The directory server system of claim 16, wherein the existing role entry is a nested role entry defining at least one other role.

18. (Previously Presented) The directory server system of claim 17, wherein the existing role entry has an attribute defining the at least one other role.

19. (Previously Presented) The directory server system of claim 16, wherein the role membership condition comprises a candidate user entry having an attribute designating the role defined by the existing role entry.

20. (Previously Presented) The directory server system of claim 16, wherein the existing role entry has a role filter condition, and the role membership condition comprises one or more attributes of a candidate user entry meeting the role filter condition.

21. (Original) The directory server system of claim 20, wherein the existing role entry has an attribute designating the role filter condition.

22. (Cancelled)

23. (Cancelled)

24. (Previously Presented) The directory server system of claim 16, wherein the extra scope is defined as a subtree of the designated location.

25. (Previously Presented) The directory server system of claim 16, wherein the first predefined rule comprises defining the existing role entry's associated scope as a subtree of a parent of the existing role entry in the tree structure.

26. (Currently Amended) The directory server system of claim 16, wherein the role mechanism is further ~~capable of~~ configured to respond[[ing]] to a request of whether a designated user entry has a given role by:

    i) identifying a corresponding role entry corresponding to the given role;

    ii) determining whether the designated user entry meets the first condition in relation to the corresponding role entry;

    iii) if the designated user entry does not meet the first condition in relation to the corresponding role entry, determining whether the corresponding role entry has extra role data defining an extra scope; and

    iv) if the corresponding role entry has extra role data, determining whether the designated user entry meets the second condition in relation to the corresponding role entry.

27. (Currently Amended) The directory server system of claim 16, wherein the role mechanism is further ~~capable of~~ configured to respond[[ing]] to a request for any user entries having a given role by:

    i) identifying a corresponding role entry corresponding to the given role;

    ii) scanning the tree to identify any user entries meeting the first condition in relation to the corresponding role entry; and

iii) if the corresponding role entry has extra data identifying an extra scope, scanning the tree to identify any user entries meeting the second condition in relation to the corresponding role entry.

28. (Currently Amended) The directory server system of claim 16, wherein the role mechanism is further ~~capable of~~ configured to respond[[ing]] to a request for roles of a given user entry by:

i) identifying a candidate role entry;

ii) determining whether the given user entry meets the first condition in relation to the candidate role entry;

iii) if the given user entry does not meet the first condition in relation to the candidate role entry and the determined role entry has extra data identifying an extra scope, determining whether the given user entry meets the second condition in relation to the candidate role entry; and

iv) repeating said i) through said iii) with other candidate roles entries until an end condition is met.

29. (Previously Presented) The directory server system of claim 28, wherein the end condition comprises having performed said i) through said iii) with substantially all the applicable candidate role entries.

30. (Previously Presented) The directory server system of claim 28, wherein the given user entry belongs to a subtree of a top suffix of the tree structure, said ii) is performed for each role entry belonging to the subtree of said top suffix, and said iii) is performed for each role entry belonging to any subtree of any top suffix of the tree structure.

31. (Currently Amended) A computer readable medium ~~having stored thereon instructions~~ comprising software code stored thereon for:

a) associating an existing role entry in a tree structure with a first user entry in the tree structure, wherein a directory server interacts with entries in the tree structure, and wherein the existing role entry defines a role and has an associated scope in the tree structure based on the existing role entry's location in the tree structure according to a first predefined rule, said associating comprising

attaching the role to the first user entry subject to a first condition comprising a role membership condition and the first user entry belonging to the associated scope;

b) adding an attribute to the existing role entry having a special attribute name and being associated with an attribute value defining an extra scope in the tree structure for the existing role entry, wherein the attribute value identifies a designated location in the tree structure outside the existing role entry's associated scope, and further wherein the extra scope is based on the designated location according to a second predefined rule; and

c) attaching the role of the existing role entry to a second user entry subject to a second condition comprising said role membership condition and the second user entry belonging to the extra scope.

32. (Previously Presented) The computer readable medium of claim 31, wherein the existing role entry is a nested role entry defining at least one other role.

33. (Previously Presented) The computer readable medium of claim 32, wherein the existing role entry has an attribute defining the at least one other role.

34. (Previously Presented) The computer readable medium of claim 31, wherein the role membership condition comprises a candidate user entry having an attribute designating the role defined by the existing role entry.

35. (Previously Presented) The computer readable medium of claim 31, wherein the existing role entry has a role filter condition, and the role membership condition comprises one or more attributes of a candidate user entry meeting the role filter condition.

36. (Original) The computer readable medium of claim 35, wherein the existing role entry has an attribute designating the role filter condition.

37. (Cancelled)

38. (Cancelled)

39. (Previously Presented) The computer readable medium of claim 31, wherein the extra scope is defined as a subtree of the designated location.

40. (Previously Presented) The computer readable medium of claim 31, wherein the first predefined rule comprises defining the existing role entry's associated scope as a subtree of a parent of the existing role entry in the tree structure.

41. (Currently Amended) The computer readable medium of claim 31, further comprising ~~instructions~~ software code stored thereon for:

d) responding to a request of whether a designated user entry has a given role by:

d1) identifying a corresponding role entry corresponding to the given role;

d2) determining whether the designated user entry meets the first condition in relation to the corresponding role entry;

d3) if the designated user entry does not meet the first condition in relation to the corresponding role entry, determining whether the corresponding role entry has extra role data identifying an extra scope; and

d4) if the corresponding role entry has extra role data, determining whether the designated user entry meets the second condition in relation to the corresponding role entry.

42. (Currently Amended) The computer readable medium of claim 31, further comprising ~~instructions~~ software code stored thereon for:

d) responding to a request for any user entries having a given role by:

d1) identifying a corresponding role entry corresponding to the given role;

d2) scanning the tree to identify any user entries meeting the first condition in relation to the corresponding role entry; and

d3) if the corresponding role entry has extra role data identifying an extra scope, scanning the tree to identify any user entries meeting the second condition in relation to the corresponding role entry.

43. (Currently Amended) The computer readable medium of claim 31, further comprising ~~instructions~~ software code stored thereon for:

d) responding to a request for roles of a given user entry by:

d1) identifying a candidate role entry;

d2) determining whether the given user entry meets the first condition in relation to the candidate role entry;

d3) if the given user entry does not meet the first condition in relation to the candidate role entry and the candidate role entry has extra role data identifying an extra scope, determining whether the given user entry meets the second condition in relation to the candidate role entry; and

d4) repeating said d1) through said d3) with other candidate role entries until an end condition is met.

44. (Previously Presented) The computer readable medium of claim 43, wherein the end condition comprises having performed said d1) through said d3) with substantially all the applicable candidate role entries.

45. (Previously Presented) The computer readable medium of claim 43, wherein the given user entry belongs to a subtree of a top suffix of the tree structure, said d2) is performed for each role entry belonging to the subtree of said top suffix, and said d3) is performed for each role entry belonging to any subtree of any top suffix of the tree structure.

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FACSIMILE TRANSMITTAL SHEET

DATE: September 13, 2006 FILE NUMBER: 03226/500001

TO: Examiner C. Dune Ly FAX NUMBER: 571.273.0716

FROM: Ellen Baker

PAGES INCLUDING COVER: 10

RE: Application No.: 10/613,660

☐ URGENT ☒ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS

Application No.: 10/613,660 Docket No.: 03226/500001; P7528

PROPOSED CLAIM AMENDMENTS
DRAFT – CLIENT APPROVAL NEEDED

Version 2

Dear Examiner,

After further consideration, we realized that our initially proposed amendment to claim 1, "to obtain an updated tree structure comprising an extended role scope" and the subsequently discussed amendment, "obtaining an updated tree structure by attaching ...." do not properly reflect the scope of our claimed invention. We are instead proposing the added step shown below which we believe addresses your concerns. We have also made appropriate corresponding amendments to claims 11-13. We look forward to speaking with you and discussing this proposed amendment.

Best regards,
Ellen Baker and Rackham Hoke

Please amend the claims as follows.

1. (Currently Amended) A method of ~~operating~~ extending role scope in a directory server system comprising:
    a) associating an existing role entry in a tree structure with a first user entry in the tree structure, wherein a directory server interacts with entries in the tree structure, and wherein the existing role entry defines a role and has an associated scope in the tree structure based on the existing role entry's location in the tree structure according to a first predefined rule, said associating comprising attaching the role to the first user entry subject to a first condition comprising a role membership condition and the first user entry belonging to the associated scope;
    b) adding an attribute to the existing role entry having a special attribute name and being associated with an attribute value defining an extra scope in the tree structure for the existing role entry, wherein the attribute value identifies a designated location in the tree structure outside the existing role entry's associated scope, and further wherein the extra scope is based on the designated location according to a second predefined rule; [[and]]

c) attaching the role of the existing role entry to a second user entry subject to a second condition comprising said role membership condition and the second user entry belonging to the extra scope; and

d) responding to a request to perform a role operation associated with the tree structure, wherein the role operation identifies that the second user entry possesses the role.

2. (Previously Presented) The method of claim 1, wherein the existing role entry is a nested role entry defining at least one other role.

3. (Previously Presented) The method of claim 2, wherein the existing role entry has an attribute defining the at least one other role.

4. (Previously Presented) The method of claim 1, wherein the role membership condition comprises a candidate user entry having an attribute designating the role defined by the existing role entry.

5. (Previously Presented) The method of claim 1, wherein the existing role entry has a role filter condition, and the role membership condition comprises one or more attributes of a candidate user entry meeting the role filter condition.

6. (Original) The method of claim 5, wherein the existing role entry has an attribute designating the role filter condition.

7. (Cancelled)

8. (Cancelled)

9. (Previously Presented) The method of claim 1, wherein the extra scope is defined as a subtree of the designated location.

10. (Previously Presented) The method of claim 1, wherein the first predefined rule comprises defining the existing role entry's associated scope as a subtree of a parent of the existing role entry in the tree structure.

11. (Previously Presented) The method of claim 1, ~~further comprising:~~ wherein the request comprises

~~d) responding to~~ a request of whether a designated user entry has a given role [[by]], and wherein responding to the request comprises:

d1) identifying a corresponding role entry corresponding to the given role;

d2) determining whether the designated user entry meets the first condition in relation to the corresponding role entry;

d3) if the designated user entry does not meet the first condition in relation to the corresponding role entry, determining whether the corresponding role entry has extra role data identifying an extra scope; and

d4) if the corresponding role entry has extra role data, determining whether the designated user entry meets the second condition in relation to the corresponding role entry.

12. (Previously Presented) The method of claim 1, ~~further comprising:~~ wherein the request comprises

~~d) responding to~~ a request for any user entries having a given role [[by]], and wherein responding to the request comprises:

d1) identifying a corresponding role entry corresponding to the given role;

d2) scanning the tree to identify any user entries meeting the first condition in relation to the corresponding role entry; and

d3) if the corresponding role entry has extra role data identifying an extra scope, scanning the tree to identify any user entries meeting the second condition in relation to the corresponding role entry.

13. (Previously Presented) The method of claim 1, ~~further comprising~~ wherein the request comprises:

~~d) responding to~~ a request for roles of a given user entry [[by]], and wherein responding to the request comprises:

d1) identifying a candidate role entry;

d2) determining whether the given user entry meets the first condition in relation to the candidate role entry;

d3) if the given user entry does not meet the first condition in relation to the candidate role entry and the candidate role entry has extra role data identifying an extra scope, determining whether the given user entry meets the second condition in relation to the candidate role entry; and

d4) repeating said d1) through said d3) with other candidate role entries until an end condition is met.

14. (Previously Presented) The method of claim 13, wherein the end condition comprises having performed said d1) through said d3) with substantially all the applicable candidate role entries.

15. (Previously Presented) The method of claim 13, wherein the given user entry belongs to a subtree of a top suffix of the tree structure, said d2) is performed for each role entry belonging to the subtree of said top suffix, and said d3) is performed for each role entry belonging to any subtree of any top suffix of the tree structure.

16. (Currently Amended) A directory server system comprising:

a directory server that interacts ~~interacting~~ with entries in a tree structure, said tree structure comprising an existing role entry and a first user entry, wherein the existing role entry defines a role and has an associated scope in the tree structure based on the existing role entry's location in the tree structure according to a first predefined rule;

a role mechanism that attaches ~~capable of attaching~~ the existing role entry's role to the first user entry subject to a first condition comprising a role membership condition and the first user entry belonging to the associated scope~~; and~~,

wherein said role mechanism further attaches ~~capable of attaching~~ the existing role entry's role to a second user entry subject to a second condition comprising said role membership condition and the second user entry belonging to an extra scope identified by extra role data of the existing role entry, wherein the extra role data comprise an added attribute having a special attribute name and being associated with an attribute value identifying a designated location in the tree structure outside of the existing role entry's associated scope, and the extra scope is based on the designated location according to a second predefined rule.

17. (Previously Presented) The directory server system of claim 16, wherein the existing role entry is a nested role entry defining at least one other role.

18. (Previously Presented) The directory server system of claim 17, wherein the existing role entry has an attribute defining the at least one other role.

19. (Previously Presented) The directory server system of claim 16, wherein the role membership condition comprises a candidate user entry having an attribute designating the role defined by the existing role entry.

20. (Previously Presented) The directory server system of claim 16, wherein the existing role entry has a role filter condition, and the role membership condition comprises one or more attributes of a candidate user entry meeting the role filter condition.

21. (Original) The directory server system of claim 20, wherein the existing role entry has an attribute designating the role filter condition.

22. (Cancelled)

23. (Cancelled)

24. (Previously Presented) The directory server system of claim 16, wherein the extra scope is defined as a subtree of the designated location.

25. (Previously Presented) The directory server system of claim 16, wherein the first predefined rule comprises defining the existing role entry's associated scope as a subtree of a parent of the existing role entry in the tree structure.

26. (Currently Amended) The directory server system of claim 16, wherein the role mechanism ~~is further capable of responding~~ responds to a request of whether a designated user entry has a given role by:

i) identifying a corresponding role entry corresponding to the given role;

ii) determining whether the designated user entry meets the first condition in relation to the corresponding role entry;

iii) if the designated user entry does not meet the first condition in relation to the corresponding role entry, determining whether the corresponding role entry has extra role data defining an extra scope; and

iv) if the corresponding role entry has extra role data, determining whether the designated user entry meets the second condition in relation to the corresponding role entry.

27. (Currently Amended) The directory server system of claim 16, wherein the role mechanism ~~is further capable of responding~~ responds to a request for any user entries having a given role by:

i) identifying a corresponding role entry corresponding to the given role;

ii) scanning the tree to identify any user entries meeting the first condition in relation to the corresponding role entry; and

iii) if the corresponding role entry has extra data identifying an extra scope, scanning the tree to identify any user entries meeting the second condition in relation to the corresponding role entry.

28. (Currently Amended) The directory server system of claim 16, wherein the role mechanism ~~is further capable of responding~~ responds to a request for roles of a given user entry by:

i) identifying a candidate role entry;

ii) determining whether the given user entry meets the first condition in relation to the candidate role entry;

iii) if the given user entry does not meet the first condition in relation to the candidate role entry and the determined role entry has extra data identifying an extra scope, determining whether the given user entry meets the second condition in relation to the candidate role entry; and

iv) repeating said i) through said iii) with other candidate roles entries until an end condition is met.

29. (Previously Presented) The directory server system of claim 28, wherein the end condition comprises having performed said i) through said iii) with substantially all the applicable candidate role entries.

30. (Previously Presented) The directory server system of claim 28, wherein the given user entry belongs to a subtree of a top suffix of the tree structure, said ii) is performed for each role entry belonging to the subtree of said top suffix, and said iii) is performed for each role entry belonging to any subtree of any top suffix of the tree structure.

31. (Currently Amended) A computer readable storage medium ~~having stored thereon instructions~~ comprising software code stored thereon for:

a) associating an existing role entry in a tree structure with a first user entry in the tree structure, wherein a directory server interacts with entries in the tree structure, and wherein the existing role entry defines a role and has an associated scope in the tree structure based on the existing role entry's location in the tree structure according to a first predefined rule, said associating comprising attaching the role to the first user entry subject to a first condition comprising a role membership condition and the first user entry belonging to the associated scope;

b) adding an attribute to the existing role entry having a special attribute name and being associated with an attribute value defining an extra scope in the tree structure for the existing role entry, wherein the attribute value identifies a designated location in the tree structure outside the existing role entry's associated scope, and further wherein the extra scope is based on the designated location according to a second predefined rule; and

c) attaching the role of the existing role entry to a second user entry subject to a second condition comprising said role membership condition and the second user entry belonging to the extra scope.

32. (Currently Amended) The computer readable storage medium of claim 31, wherein the existing role entry is a nested role entry defining at least one other role.

33. (Currently Amended) The computer readable storage medium of claim 32, wherein the existing role entry has an attribute defining the at least one other role.

34. (Currently Amended) The computer readable storage medium of claim 31, wherein the role membership condition comprises a candidate user entry having an attribute designating the role defined by the existing role entry.

35. (Currently Amended) The computer readable storage medium of claim 31, wherein the existing role entry has a role filter condition, and the role membership condition comprises one or more attributes of a candidate user entry meeting the role filter condition.

36. (Currently Amended) The computer readable storage medium of claim 35, wherein the existing role entry has an attribute designating the role filter condition.

37. (Cancelled)

38. (Cancelled)

39. (Currently Amended) The computer readable storage medium of claim 31, wherein the extra scope is defined as a subtree of the designated location.

40. (Currently Amended) The computer readable storage medium of claim 31, wherein the first predefined rule comprises defining the existing role entry's associated scope as a subtree of a parent of the existing role entry in the tree structure.

41. (Currently Amended) The computer readable storage medium of claim 31, further comprising ~~instructions~~ software code stored thereon for:

~~d)~~ responding to a request of whether a designated user entry has a given role by:

d1) identifying a corresponding role entry corresponding to the given role;

d2) determining whether the designated user entry meets the first condition in relation to the corresponding role entry;

d3) if the designated user entry does not meet the first condition in relation to the corresponding role entry, determining whether the corresponding role entry has extra role data identifying an extra scope; and

d4) if the corresponding role entry has extra role data, determining whether the designated user entry meets the second condition in relation to the corresponding role entry.

42. (Currently Amended) The computer readable storage medium of claim 31, further comprising ~~instructions~~ software code stored thereon for:

~~d)~~ responding to a request for any user entries having a given role by:

d1) identifying a corresponding role entry corresponding to the given role;

d2) scanning the tree to identify any user entries meeting the first condition in relation to the corresponding role entry; and

d3) if the corresponding role entry has extra role data identifying an extra scope, scanning the tree to identify any user entries meeting the second condition in relation to the corresponding role entry.

43. (Currently Amended) The computer readable storage medium of claim 31, further comprising ~~instructions~~ software code stored thereon for:

~~d)~~ responding to a request for roles of a given user entry by:

d1) identifying a candidate role entry;

d2) determining whether the given user entry meets the first condition in relation to the candidate role entry;

d3) if the given user entry does not meet the first condition in relation to the candidate role entry and the candidate role entry has extra role data identifying an extra scope, determining whether the given user entry meets the second condition in relation to the candidate role entry; and

d4) repeating said d1) through said d3) with other candidate role entries until an end condition is met.

44. (Currently Amended) The computer readable storage medium of claim 43, wherein the end condition comprises having performed said d1) through said d3) with substantially all the applicable candidate role entries.

45. (Currently Amended) The computer readable storage medium of claim 43, wherein the given user entry belongs to a subtree of a top suffix of the tree structure, said d2) is performed for each role entry belonging to the subtree of said top suffix, and said d3) is performed for each role entry belonging to any subtree of any top suffix of the tree structure.